

REMARKS

Claims 1-37 are pending in the present application. The Examiner has rejected claims 1-37.

I. ATTORNEY DOCKET NUMBER

Applicants respectfully request that the attorney docket number of the present application be changed from "40689/CAG/B600" to --15268US01--.

II. REJECTION UNDER 35 U.S.C. § 103(a) WITH RESPECT TO CLAIMS 1-12, 20-33, 36 AND 37

Claims 1-12, 20-33, 36 and 37 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,006,112 ("Rucki") in view of U.S. Patent No. 6,327,463 B1 ("Welland"). Applicants respectfully traverse the rejection.

A. Claims 1-12, 32 and 33

To maintain an obviousness rejection, the combination of Rucki and Welland must teach or suggest each and every element as set forth in claim 1. Applicants respectfully submit that the combination of Rucki and Welland does not teach or suggest each and every element as set forth in claim 1. For example, claim 1 recites "wherein the at least one coupling circuit continuously couples, with a substantially constant impedance, the at least one transmitter output to the at least one receiver input". The Examiner admits that Rucki does not teach or suggest at least these elements. See, e.g., Office Action at page 3. However, the Examiner alleges that Welland teaches these elements and is properly combined with Rucki. Applicants respectfully disagree.

1. Rucki and Welland Do Not Teach Each and Every Element

Welland relates to a phase-locked loop (PLL) frequency synthesizer with a variable capacitance that has a discretely variable capacitance in conjunction with a continuously variable capacitance. See, e.g., lines 3-6 of the Abstract of Welland. Thus, Welland teaches *variable* capacitances in a frequency synthesizer. On the other hand, claim 1 recites "wherein the at least one coupling circuit continuously couples, with a *substantially constant* impedance," Thus, since Welland does not teach or suggest at least these elements and since the Examiner has

admitted that Rucki does not teach or suggest at least these elements, the combination of Rucki and Welland does not teach or suggest at least these elements and the obviousness rejection cannot be maintained.

2. Rucki and Welland Teach Away From Recited Elements of Claim 1

In fact, both Rucki and Welland teach away from the above-recited elements as set forth in claim 1. M.P.E.P. § 2145(X)(D)(1) states that "[a] prior art reference that 'teaches away' from the claimed invention is a significant factor to be considered in determining obviousness". As supported by the above discussions, Welland teaches away from a substantially constant impedance. Furthermore, not only does Rucki not teach the above-recited elements as set forth in claim 1, Rucki teaches away from "wherein the at least one coupling circuit continuously couples ... the at least one transmitter output to the at least one receiver input". The attention of the Examiner is respectfully drawn to FIG. 3 which illustrates normal operation of the transceiver 300 and to col. 4, lines 33-40 (underlining added for emphasis) of Rucki:

During normal operation, the output of transmitter 302 is isolated from the input of receiver 307 by a series parallel network having three open switches on one serial leg (switches S1, S3, and S4) and two open switches and an attenuator on the serial other leg (switch S2, attenuator 315, and switch S4). This configuration of disconnectable interconnects (switches S1-S4) provides better isolation than the prior art scheme employing couplers.

Thus, Rucki teaches away from continuously coupling the at least one transmitter output to the at least one receiver input. The attention of the Examiner is also respectfully drawn to FIG. 5 which illustrates the scanning mode of the transceiver 300. In FIG. 5, an output of the transmitter 302 is not coupled to the an input of the receiver 307 because of an open circuit caused by a "disconnectable interconnect" (i.e., switch S1). M.P.E.P. § 2144.05(III) states that "[a] *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention". Thus, an obviousness rejection based on Rucki or Welland, individually or combined, cannot be maintained because the cited patent documents, individually or combined, teach away from the claimed invention as set forth in claim 1.

3. Rucki and Welland Teach Away From Each Other

Rucki and Welland not only teach away from the claimed invention, but also teach away from each other. M.P.E.P. § 2145(X)(D)(2) clearly states that “[i]t is improper to combine references where the references teach away from their combination.” As discussed above, Rucki teaches away from continuously coupling as set forth in claim 1. Thus, any document cited by the Examiner as allegedly teaching continuously coupling as set forth in claim 1 would have to teach away from Rucki. For example, assume, **only for the sake of argument**, that the Examiner alleges that Welland teaches continuously coupling as set forth in claim 1. Since Rucki teaches away from continuously coupling as set forth in claim 1, Rucki teaches away from continuously coupling as allegedly taught by Welland. Thus, Rucki and Welland teach away from each other and are improperly combined. Accordingly, not only are Rucki and Welland improperly combined for teaching away, but Rucki and any document that teaches continuously coupling as set forth in claim 1 will be improperly combined for teaching away.

4. No Motivation Provided For Combining Rucki and Welland

In addition, there is no motivation for combining the teachings of Welland to the teachings of Rucki to teach or suggest each and every element as set forth in claim 1. For example, with respect to the figures which were discussed in the text cited by the Examiner in support of the obviousness rejection, FIGS. 11 and 12 of Welland show components which are inside the VCO 400 as illustrated in FIG. 10. FIG. 9A of Welland shows components of the VCO 400. The VCO 400 is further illustrated in FIG. 4 of Welland which is inside the frequency synthesizer 100 in FIG. 1 of Welland, which is part of the receiver 150. In Welland, the receiver 150 is connected to an LNA 112 which is connected to a BPF 110 which, in turn, is connected to an antenna 108. Thus, the components in Welland to which the Examiner has emphasized are *inside* the receiver and *downstream* of the LNA in the receive communication path. The switch 311 illustrated in Rucki, which was also emphasized by the Examiner, is *outside* the receiver 307 and *upstream* of the LNA 308 in the receive communication path. M.P.E.P. § 2141 states that “[w]hen applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: ... (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention”. Accordingly, Applicants respectfully submit that there is no motivation,

without the benefit of impermissible hindsight vision, to combine the teachings of Welland and Rucki in such a manner as to sustain an obviousness rejection.

5. Obviousness Rejection Cannot Be Maintained

For at least the above reasons, an obviousness rejection over Rucki in view of Welland cannot be maintained with respect to claim 1 and its dependent claims (i.e., claims 2-12, 32 and 33). It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 1-12, 32 and 33.

B. Claims 20-31, 36 and 37

Claim 20 recites "a coupling circuit for continuously coupling, with a substantially constant impedancce, the transmitter output to the receiver input". Claim 20 recites language which, in many respects, is identical or similar to language recited in claim 1. Accordingly, Applicants respectfully submit that all of the arguments made with respect to claim 1 be made with respect to claim 20.

For at least the above reasons, an obviousness rejection over Rucki in view of Welland cannot be maintained with respect to claim 20 and its dependent claims (i.e., claims 21-31, 36 and 37). It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 20-31, 36 and 37.

III. REJECTION UNDER 35 U.S.C. § 103(a) WITH RESPECT TO CLAIMS 13-15, 19, 34 AND 35

Claims 13-15, 19, 34 and 35 stand rejected under 35 U.S.C. § 103(a) as being obvious over Rucki in view of U.S. Patent No. 5,054,114 ("Erickson"). Applicants respectfully traverse the rejection.

1. Rucki and Erickson Teach Away From Each Other

The Examiner admits that Rucki does not teach or suggest "continuously coupling ... the transmitter output to the receiver output" as set forth in claim 13. See, e.g., Office Action at page 8. The Examiner alleges that Erickson teaches "continuously coupling ... the transmitter output to the receiver output". Applicants disagree with this contention; however, *only for the*

sake of argument, assume Erickson allegedly does teach these elements as set forth in claim 13. Rucki teaches away from at least these elements as set forth in claim 13 and therefore teaches away from Erickson because, *only for the sake of argument*, Erickson allegedly teaches these elements. Accordingly, Rucki teaches away from Erickson, as alleged by the Examiner. Since Rucki teaches away from Erickson, as alleged by the Examiner, Rucki and Erickson, as alleged by the Examiner, cannot be properly combined.

To demonstrate that Rucki teaches away from these elements as set forth in claim 13 and thus teaches away from Erickson, as alleged by the Examiner, the attention of the Examiner is respectfully drawn to FIG. 3 which illustrates the normal mode of the transceiver 300 and to col. 4, lines 33-40 (underlining added for emphasis) of Rucki:

During normal operation, the output of transmitter 302 is isolated from the input of receiver 307 by a series parallel network having three open switches on one serial leg (switches S1, S3, and S4) and two open switches and an attenuator on the serial other leg (switch S2, attenuator 315, and switch S4). This configuration of disconnectable interconnects (switches S1-S4) provides better isolation than the prior art scheme employing couplers.

Thus, Rucki teaches away from continuously coupling the transmitter output to the receiver input. The attention of the Examiner is also respectfully drawn to FIG. 5 which illustrates the scanning mode of the transceiver 300. In FIG. 5, an output of the transmitter 302 is not coupled to the an input of the receiver 307 because of an open circuit caused by a "disconnectable interconnect" (i.e., switch S1).

Accordingly, since Rucki teaches away from at least these elements as set forth in claim 13, Rucki teaches away from Erickson as alleged by the Examiner. Thus, Rucki and Erickson cannot be properly combined and the obviousness rejection cannot be maintained.

For at least the above reasons, an obviousness rejection over Rucki in view of Erickson cannot be maintained with respect to claim 13 and its dependent claims (i.e., claims 14, 15, 19, 34 and 35). It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 13-15, 19, 34 and 35.

2. Rucki and Erickson Do Not Teach Each and Every Element

To maintain an obvious rejection, the combination of Rucki and Erickson must teach or suggest each and every element as set forth in claim 13. Applicants respectfully submit that the

combination of Rucki and Erickson does not teach or suggest each and every element as set forth in claim 13. For example, claim 13 recites "continuously coupling, with a substantially constant impedance, the transmitter output to the receiver input". The Examiner has already admitted that Rucki does not teach or suggest at least these elements. See, e.g., Office Action at page 8. However, the Examiner contends that Erickson teaches these elements. Applicants respectfully disagree. The attention of the Examiner is respectfully drawn to the sole figure of Erickson which clearly shows a switch SW1 which can open to decouple the transmitter 12 from the receiver 14. SW1 is open during a receive operation. See, e.g., col. 4, lines 23-24 of Erickson. When switch SW1 is open, the transmitter output is not coupled to the receiver input. Thus, Erickson does not teach continuous coupling of the transmitter output to the receiver input.

For at least the above reasons, Rucki or Erickson, individually or combined, do not teach or suggest each and every element as set forth in claim 13. Thus, an obviousness rejection over Rucki in view of Erickson cannot be maintained with respect to claim 13 and its dependent claims (i.e., claims 14, 15, 19, 34 and 35). It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 13-15, 19, 34 and 35.

IV. REJECTION UNDER 35 U.S.C. § 103(a) WITH RESPECT TO CLAIMS 16-18

Claims 16-18 stand rejected under 35 U.S.C. § 103(a) as being obvious over Rucki in view of Erickson, and further in view of U.S. Patent No. 5,375,257 ("Lampen"). Applicants respectfully traverse the rejection.

Applicants respectfully submit that, since Rucki and Erickson cannot be properly combined for the reasons state above, Rucki, Erickson and Lampen cannot be properly combined. Since Rucki, Erickson and Lampen cannot be properly combined, the obviousness rejection based on the combination of Rucki, Erickson and Lampen cannot be maintained. It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 16-18.


V. CONCLUSION

In view of at least the foregoing, it is respectfully submitted that the pending claims 1-37 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Dated: April 29, 2004

Respectfully submitted,


Michael T. Cruz
Reg. No. 44,636

McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th Floor
Chicago, Illinois 60661-2565
Telephone: (312) 775-8084
Facsimile: (312) 775-8100